



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/194,112	11/23/98	ONUKE	M 229-532PCT

002292 QM12/1213
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EXAMINER

BLAU, S

ART UNIT	PAPER NUMBER
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3711

DATE MAILED: 12/13/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/194,112

Applicant(s)

Onuki

Examiner

Stephen Blau

Group Art Unit

3711



☒ Responsive to communication(s) filed on Jul 2, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-8 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-8 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peker.

Peker discloses a golf club head having a hitting face formed of a metallic amorphous metal, an amorphous alloy of zirconium base, Ni, Al, Cu, Hf, tensile strength 1.9 GPa (194 kgf/mm²) and compositions in atomic percentages similar to tables 1-3 (Col. 4 Lns. 12-43). Clearly the hitting face material has a Young's modulus and a hardness and one skilled in the art in manufacturing a face would have selected a composition having a suitable hardness and Young's modulus in which a hardness and Young's modulus which meets the relationships in claim 1 and 5 are included.

The difference between the claims and Peker is that Peker does not disclose a relationship between Young's modulus and tensile strength as defined by claim 1 and a relationship of Young's modulus and hardness as defined by claim 5.

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It would have been obvious to modify the face of Peker to have a Young's modulus less than $22,333 \text{ kgf/mm}^2$ in order to minimize the cost of forming a face. In addition, it would have been obvious to have a hardness which meets the relationship of claim 5 in order to have a face which maximizes the transfer of energy to a ball at impact.

Drawings

3. The drawings of this application have not been reviewed by the Draftsman. Upon allowance of this case the drawings will be evaluated under 37 CFR 1.81.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP-59-228874 and JP-60-7873 contain a head having Ni, Cu, Zr, Zn, or Al. Yamaguchi discloses a head having a Young's Modulus $21,000 \text{ kg/mm}^2$. Masaki discloses a head having a Young's modulus and a Vickers hardness.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can

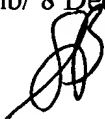
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contact his supervisor Jeanette Chapman whose telephone number is (703) 308-1310. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858.

slb/ 8 December 1999



JEANETTE CHAPMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700